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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,262

11/29/2007

Anant A. Setlur

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12/09/2009

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EXAMINER

MALSAWMA, LALRINFAMKIM HMAR

ART UNIT

PAPER NUMBER

2892

MAIL DATE

DELIVERY MODE

12/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,262	SETLUR ET AL.	
	Examiner	Art Unit	
	Lex Malsawma	2892	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 9 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Srivastava et al. (6,466,135 B1; hereinafter, "**Srivastava**").

Regarding claims 1-6, 9 and 16:

Srivastava discloses a light emitting device (and method of making it) comprising an LED 11 (Figs. 7 and 11) and one or more phosphor materials 21;

the LED is comprised of a semiconductor material;

the LED emits light between 350 and 490 nm (e.g., 440-455 nm, see col. 7, lines 44-47);

the phosphor material provides Eu^{2+} - Mn^{2+} energy transfer (e.g., col. 8, line 48);

the phosphor material includes at least Eu^{2+} ; and

the phosphor material 21 is positioned remote to the LED.

With regard to the limitations in claims 1 and 4 directed to the product (incident LED flux) x (excitation cross-section of the phosphor) x (phosphor material decay time) being less than 0.3 (or 0.1), these limitations are considered to be an inherent property of the phosphor(s) disclosed by Srivastava, especially because it appears Srivastava utilizes the same materials disclosed in the currently claimed invention. Therefore, these claims are anticipated by Srivastava.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 7, 8 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Srivastava** (6,466,135 B1).

Initially, these claims are generally directed to a device that requires at least two phosphor layers, wherein the phosphor layers have different decay times and are positioned at different distances relative to the LED chip. It is noted Srivastava discloses the device comprises a combination of phosphors (e.g., see Col. 7, beginning from line 31), wherein the phosphor layers are formed of various different materials and the phosphor layer(s) 21 may be positioned at various distances from the LED chip (Figs. 7 and 8). Given Srivastava, one of ordinary skill in the art would have readily recognized that combining at least two phosphor layers into a device would result in one phosphor layer being placed closer to the LED chip. Furthermore,

since Srivastava discloses various materials suitable for the phosphor layers (e.g., see Fig. 5), one of ordinary skill in the art would have been able to choose phosphor layers having slower (or faster) decay time depending of a particular design requirement. Therefore, the current claims are deemed obvious over Srivastava alone primarily because Srivastava discloses various materials that could be readily chosen to arrive at the current invention, i.e., one of ordinary skill in the art could have easily chosen specific combinations of phosphor materials for the list of materials disclosed by Srivastava depending on some particular design requirement. Note that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references listed on the attached PTO-892 are cited to show phosphor material having similar properties to those of the current invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lex Malsawma whose telephone number is 571-272-1903. The examiner can normally be reached on Mon. - Thur. (4-12 hours between 5:30AM and 10 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao Le can be reached on 571-272-1708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lex Malsawma/
Primary Examiner, Art Unit 2892